



SAEINDIA
SKIP SAEINDIA STUDENT KNOWLEDGE IMPROVEMENT PROGRAM

AUTOMOTIVE ENGINES & ALTERNATIVE FUELS

(Especially for Mechanical, Automobile Engineering students & future BAJA, FSAE SUPRA participants)

Trainer: Dr. E. Rajasekar M.E., Ph.D.,
(Professor, Faculty of Automobile Engineering, IRTT)

Date: 18th & 19th March 2017

Venue:

SAEINDIA Southern Section,
Guindy, Chennai -600032

Phone: 044-42188651-52

Mobile: +91-9600213907

E-mail Id: skip@saeiss.org

Website: www.saeiss.org

SAEINDIA
SAEINDIA
SOUTHERN SECTION

Course Content

- ✓ Basics of Two stroke and Four Stroke Engines
- ✓ Basics of CI and SI Engines
- ✓ Theory of Combustion in SI and CI Engines
- ✓ Knock and Detonation, Engine Cycle Analysis
- ✓ Combustion Modelling, Combustion Analysis
- ✓ Thermodynamic based in cylinder models
- ✓ Concept of Low Heat Rejection Engines
- ✓ Variable Ratio Compression Engines
- ✓ Free Piston engines, Lean Burn Engines
- ✓ Stratified Charge Engines
- ✓ Gasoline Direct Injection
- ✓ Emission Reduction Technologies
- ✓ Modern Engines with Sensors
- ✓ Alternative Fuels & Engine Modifications Required
- ✓ Dual fuel and Bi-fuel Engines
- ✓ Hydrogen, LNG, CNG, LPG, Bio Gas
- ✓ Bio Fuels, Vegetable Oils and Biodiesel
- ✓ Alcohol and Reformed Fuels

Intended Learning Objectives

- To understand the working principles and constructional details of Automotive SI and CI Engines and the different versions of advanced technologies like VCR Engines, LB Engines, Free piston Engines, Stratified Charge Engines, Dual fuel and Bi-fuel Engines etc.,
- To understand the Combustion theories along with Concept of Knock and Detonation in Diesel and Gasoline Engines.
- To explore the possibilities of using potential Alternative fuels in IC Engines and the Engine modifications required to use them.

Benefits of attending this course

Since the course is handled by the person who is an experienced speaker and specialized in Automotive Internal Combustion Engines, Engine emissions, Alternative fuels etc., and the lectures will give invaluable information to youngsters who are interested in automobiles.

Who should attend?

The students studying in undergraduate and post graduate courses in Automobile, Mechanical, Aeronautical engineering and IC Engines will find that most of the topics in the program cover their syllabus requirements and future developments. This program is designed for any automotive enthusiast.

About the Course

This course is about the fundamentals and advanced techniques used in Automotive Engines and their Alternative fuels. The Course will be through PPT presentation and animated videos.

Course Date & Time

Topic: Automotive Engines	Date: 18th & 19th March 2017
Start: 9:00 AM to 5.00 PM (Lunch time: 12.00 PM to 1.00 PM)	

How to enrol?

Fee Structure (Two days)

Student Member	Rs.1500/-	Last date of Registration 17th March 2017
Registration fee for two days		

- Admissions would be on first come first serve basis and will be strictly through Enrolment Procedure
- Limited seats per batch
- **Special discount on group booking (Minimum 10 attendees for same session- 10% Discount)**

Pay course fee through DD/Cheque or Transfer to our account:

- Name of the Account : **SAEINDIA Southern Section Student Convention**
- Account No. : **32506106802** (Saving account)
- Bank Name : State Bank of India
- Branch Name : Kotturpuram, Chennai
- IFSC Code : SBIN0001669

Facilities provided during course

- Networking Tea/Snacks
- Networking Lunch
- Delegate Kits
- Certificate & Course materials

Enrolment Procedure

- Send us following details to **skip@saeiss.org** for registration
- Online Registration Link:
http://onlineregistration.saeiss.org/event_register.php

Speaker Profile:

E. Rajasekar, born in 1963, obtained his B.Sc. degree in 1983 with first class and distinction from RDM Government College of Arts and Science, Sivaganga. He obtained his B.Tech. Degree with Automobile Engineering specialization in 1986 with first class from M.I.T., Anna University, Chennai.

He obtained his M.E. Degree with Automobile Engineering specialization in 1992 with Gold medal from M.I.T., Anna University, and Chennai. He obtained his Ph.D in Mechanical Engineering discipline from Anna University, Chennai.

Total Automotive Teaching Experience: 30 Years

Publications – 26 papers published in Refereed National Journals / International journals and 28 papers presented in International / National Conferences.

He is Editorial member for 3 international journals and Review member for 2 international journals.

Program organized - He conducted 4 National level workshops and SAEINDIA Southern Section sponsored Employee Development for Graduate Engineers training program (EDGE) for Graduate Engineers of M/s. Wabco India Limited, Chennai two times. He has given special training for Motor Vehicle Inspector Courses several times.

Conducted a two days training program on Sensors and Actuators for Practicing Engineers of Mahindra & Mahindra in Mahindra Research Valley, Mahindra World City, Chennai.

Membership in Professional Societies:

- Life member in Combustion Institute [UK]
- Member in Institute of Engineers (India)
- Member in Indian Society for Technical Education
- Member in Society of Automotive Engineers India
- Member in Society of Automotive Engineers International

Honor Received: He has been nominated to Management Committee and elected as Governing Council Member and Secretary of the SAEINDIA Southern Section for the period 2016 – 2018.

He has delivered plentiful Invited Lectures in various Faculty Development Programs, Mechanical and Automobile Engineering Association Functions and SAEINDIA SS Collegiate Clubs etc. He is a Visiting Faculty and Member - Board of Studies for various Colleges and Universities.

About SAEINDIA Southern Section

- ❖ SAEINDIA Southern Section is a premier society that serves the cause of mobility engineering. It is a unique society that includes professional engineers who serve different OEMS and Suppliers, academia as well as budding engineers (students) who aspire to be part of the professionally attractive field of mobility engineers. We believe that Mobility Engineering is a knowledge rich field and that learning and sharing can be fun and rewarding. To this end, SAEISS organizes several events throughout the year, runs programs that enrich and engage and conducts lectures and symposia. It is a part of SAEINDIA.
- ❖ SAEINDIA is a Premier Professional society that serves the Mobility Engineering Community engaged in the design, manufacture and service of self-propelled vehicles and systems that move in land, sea, air and space. It is an affiliate society of SAE International which is head quartered in USA and has a glorious record of over 100 years of service to the mobility community. SAEINDIA works closely with other fraternal societies such as Society of Indian Automobile Manufacturers (SIAM), Automotive Component Manufacturers of India (ACMA) and American Society of Engineers of Indian Origin (ASEI) for spreading knowledge and relevant information to a wider cross section of the Indian community. It is also a member of International Federation of Automotive Engineering Societies (FISITA).



Further please contact:

**E. Gajenderan, Program Executive
SAEINDIA SOUTHERN SECTION**

Mail Id: skip@saeiss.org

Mobile No: 9600213907